

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested. Claims 3 and 48 have been amended to correct typographical errors. Claims 1-90 are currently pending in the application.

Rejection under 35 U.S.C. §103(a)

In the Office Action, the Examiner rejected independent claims 1 and 46 under 35 U.S.C. §103(a) as being unpatentable over Gardiner et al. (U.S. Patent No. 6,362,818) taken with Baldwin (Pub. No. US2002/0130863) in view of Duluk, Jr. et al. (Pub. No. US2002/0196251) and further in view of Heeschen et al. (U.S. Patent No. 6,380,935) taken with Morein (Pub. No. US2003/0080959). This rejection is respectfully traversed on at least two grounds.

First, Applicants submit that the Examiner has failed to properly establish a prima facie case of obviousness. In order to establish a prima facie case of obviousness, the Examiner must show some suggestion or motivation to combine the references. MPEP §2142. This suggestion or motivation must be found in the prior art. MPEP §2143; *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention, or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. MPEP §2142; *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). The rationale offered by the Examiner must be clear and specific. Mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter. *In re Rouffet*, 149 F.3d 1350,

1355 and 1357 (Fed. Cir. 1998). The Examiner must articulate the basis on which he/she concludes that it would have been obvious to combine the references. *Id.* In practice, this requires the Examiner to explain the reasons why one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention. *Id.*, at 1357-59. The rationale offered by the Examiner cannot be merely conclusory; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*, at 1355-59. Case law makes it clear that the best defense against the subtle but powerful attraction of a hindsight based obviousness analysis is rigorous application of the requirement for a showing of the motivation or suggestion to combine references. *In re Lee*, 61 USPQ2D 1430, 1433 (Fed. Cir. 2002). When the Examiner does not explain the motivation or suggestion that would have led the skilled artisan to combine the teachings of the references, it is inferred that the Examiner used hindsight. *Rouffet*, 149 F.3d 1355, 1358. As is made clear by the courts, the use of hindsight in an obviousness analysis is impermissible. *In re Dembiczak*, 175 F.3d 994.

In the present case, the Examiner has failed to clearly articulate why one of ordinary skill in the art would have been motivated to select and combine the references in the manner suggested by the Examiner. Instead, the Examiner has offered merely conclusory remarks to justify his rejection. For example, in contending that it would have been obvious to combine the teachings of Gardiner and Baldwin, the Examiner simply stated:

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Gardiner et al the feature as taught by Baldwin in order to convert the graphics objects into dots for transmission to raster graphics displays.

This is a merely conclusory statement. It provides no reasoned explanation as to why it would have been obvious to combine the references in the suggested manner. The Examiner has not cited any portion of the references as suggesting this combination. The Examiner has also offered no explanation as to why one of ordinary skill in the art would have selected these references, and combined them in the manner suggested by the Examiner. The only rationale offered by the Examiner is that the combination enables graphics objects to be converted into dots for transmission to raster graphics displays in the manner set forth in claims 1 and 46. Basically, the Examiner is saying that the combination is obvious because it fits into the claims that are being rejected! There is no clearer example of the use of hindsight than this.

The Examiner's rationale in other parts of the rejection is no better. For example, in contending that it would have been obvious to combine the teachings of Gardiner, Baldwin, and Duluk, the Examiner stated:

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Gardiner et al taken with Baldwin Jr. et al. the feature as taught by Duluk Jr. et al. in order to put in place the means for making the tile related information available for processing relative to the generation of displayed images.

Again, this statement is merely conclusory. Again, the Examiner has cited no portions of the references as suggesting this combination. Again, the Examiner has offered no explanation as to why one of ordinary skill in the art would have selected these references, and combined them in the manner suggested by the Examiner. Without such explanation, it can only be concluded that such a combination could only be achieved through hindsight.

Overall, the Examiner has provided little or no justification for any of the suggested combinations. That being the case, Applicants submit that the combinations

were not taught, suggested, or motivated by the prior art. Rather, it appears that they were motivated by hindsight. Specifically, the Examiner used the independent claims as a roadmap, and then proceeded to find the pieces set forth in the roadmap. The fact that the Examiner combined five different references in a piecemeal fashion to reject two relatively brief claims is evidence of this. As noted above, the mere identification in the prior art of each element in a claim is insufficient to defeat the patentability of the claim. Rather, the Examiner must articulate a rationale for why it would have been obvious to combine the references in the manner set forth in the claim. As argued above, the Examiner has failed to provide such a rationale in the present case. Absent such a rationale, it is inferred that the Examiner used hindsight. Because the use of hindsight is clearly impermissible in an obviousness analysis, the rejection cannot be supported. Thus, for at least this reason, Applicants submit that the Examiner has failed to establish a prima facie case of obviousness.

As an additional ground for traversal, Applicants note that even if the references were combined in the manner suggested by the Examiner, they would still not produce the invention as claimed in claims 1 and 46. Specifically, the limitations "determining whether the tile is currently completely encompassed by a large primitive" and "in response to a determination that the tile is currently completely encompassed by a large primitive, obtaining information pertaining to the tile from a local storage rather than from the corresponding buffer section, thereby reducing buffer section traffic" would still not be disclosed.

To elaborate, in rejecting the claims, the Examiner contended that the limitation "determining whether the tile is currently completely encompassed by a large primitive"

is taught by Heeschen. In support of his rejection, the Examiner cited Col. 20, lines 28-40 of Heeschen. Applicants respectfully submit that this portion of Heeschen does not teach what the Examiner contends that it teaches. In the cited excerpt, Heeschen discusses how a bounding box method may be used to identify tiles affected by a graphics primitive (a triangle). According to the bounding box method, a rectangle (the bounding box) is drawn that touches the vertices of the triangle (the primitive). All tiles within the bounding box are identified as being tiles that are affected by the primitive (the triangle).

A subtle but very significant point to note with regard to the bounding box method is that the bounding box is not the primitive. The triangle is the primitive. Because it is a rectangle, the bounding box by definition is larger than the primitive. By determining whether a tile is within the bounding box, the bounding box method is not determining whether the tile is completely encompassed by the primitive. Rather, it is determining whether the tile is completely encompassed by the bounding box. Because the bounding box is larger than the primitive, a tile that is completely encompassed by the bounding box may not be completely encompassed by the primitive. An example of this is shown in the enclosed Drawing 1, wherein a tile is completely enclosed by a bounding box but not by a triangle primitive. As this discussion shows, when the bounding box method determines whether a tile is within the bounding box, it is not determining whether the tile is completely encompassed by the primitive. Determining whether a tile is completely encompassed by a primitive is neither a goal nor a product of the bounding box method. There is nothing in the cited excerpt that discloses or suggests "determining whether the tile is currently completely encompassed by a large primitive", as recited in claims 1 and 46. Thus, even if the references were combined as suggested by the

Examiner, this aspect of the claims would still not be disclosed.

In rejecting claims 1 and 46, the Examiner further contended that the limitation "in response to a determination that the tile is currently completely encompassed by a large primitive, obtaining information pertaining to the tile from a local storage rather than from the corresponding buffer section, thereby reducing buffer section traffic" is taught by Morein. In support of his rejection, the Examiner cited paragraph 0048 of Morein. Applicants respectfully submit that this portion of Morein does not teach what the Examiner contends that it teaches. In the cited excerpt, Morein discloses the use of a hierarchical Z-buffer to reduce Z-buffer traffic. From this excerpt, Applicants do not see any discussion of "obtaining information pertaining to the tile from a local storage rather than from the corresponding buffer section". Thus, it is unclear how this limitation of claims 1 and 46 is taught by Morein. What is clear, however, is the absence of any mention in the cited excerpt of performing any action "in response to a determination that the tile is currently completely encompassed by a large primitive". There is nothing in the cited excerpt that discusses determining whether a tile is currently completely encompassed by a large primitive, and there is certainly nothing in the cited excerpt that discloses or suggests obtaining information pertaining to the tile from a local storage rather than from the corresponding buffer section in response to a determination that the tile is currently completely encompassed by a large primitive. Since this aspect of claims 1 and 46 is not disclosed or suggested by Morein, even if the references were combined in the manner suggested by the Examiner, they would still not yield the invention as claimed in claims 1 and 46.

For at least the reasons given above, Applicants submit that claims 1 and 46 are patentable over the applied references. Hence, Applicants respectfully request that this rejection be withdrawn.

DEPENDENT CLAIMS

The pending claims not discussed so far are dependant claims that depend directly or indirectly on a claim that is discussed above. Because each of the dependant claims includes the limitations of the claim upon which it depends, the dependant claims are patentable for at least those reasons given above for the claim upon which it depends.

In addition, the dependent claims introduce additional limitations that independently render them patentable. However, due to the fundamental difference already identified, a separate discussion of those limitations is not included at this time in order to expedite the favorable resolution of this case.

CONCLUSION

For the reasons set forth above, all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all pending claims is hereby respectfully solicited.

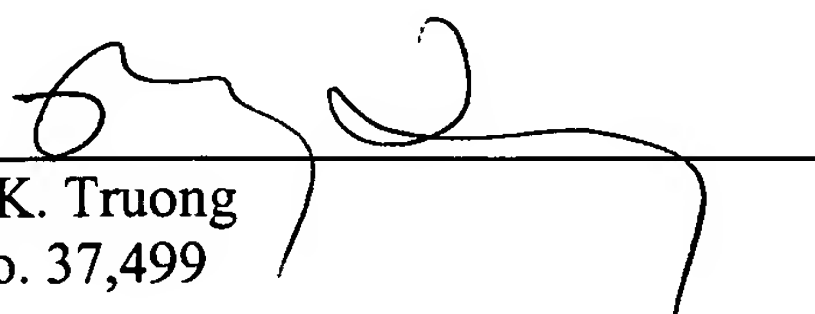
The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the prosecution of the present application.

No extension fee is believed to be due. However, to the extent necessary,
Applicants petition for an extension of time under 37 C.F.R. § 1.136. The Commissioner
is authorized to charge any fee that may be due in relation to this application to our
Deposit Account No. 50-1302.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

on September 19, 2006
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by 
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